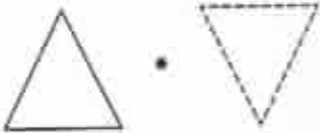
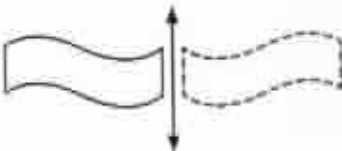

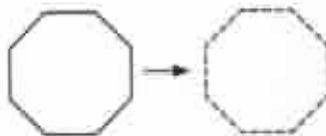
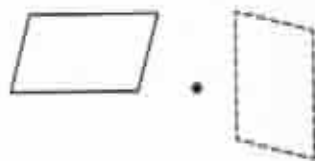
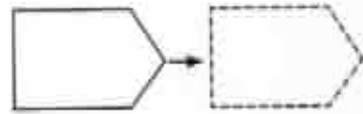




Identifying Transformations

Transformations and Symmetry

Circle the name of the correct transformation for each pair of figures or shapes below. If none of the transformations have been performed, circle *none*.

- | | | | | | |
|----|---|------------|----------|-------------|------|
| 1. |  | reflection | rotation | translation | none |
| 2. |  | reflection | rotation | translation | none |
| 3. |  | reflection | rotation | translation | none |
| 4. |  | reflection | rotation | translation | none |
| 5. |  | reflection | rotation | translation | none |
| 6. |  | reflection | rotation | translation | none |
| 7. |  | reflection | rotation | translation | none |
| 8. |  | reflection | rotation | translation | none |

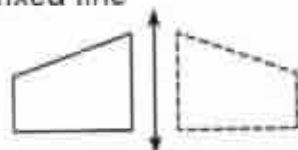
Transformations

Transformations and Symmetry

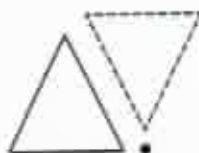
A **transformation** is a movement or specific change to a geometric figure.

Reflections, rotations, and translations are transformations that **do not** result in an object changing size or shape. Therefore, the transformed objects are congruent.

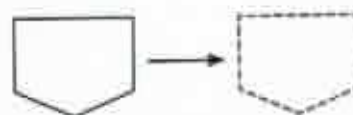
Reflection (or flip)—a transformation that produces a mirror image of a figure reflected across a fixed line



Rotation (or turn)—a transformation that turns a figure around a fixed point



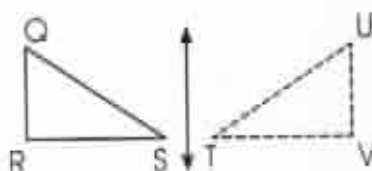
Translation (or slide)—a transformation that shifts or moves a shape in one direction without rotation



Name the congruent angles of each reflection.

1. $\angle RQS \cong \angle \underline{\hspace{1cm}}$; $\angle QRS \cong \angle \underline{\hspace{1cm}}$

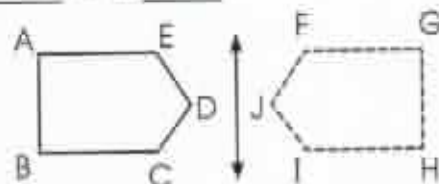
$\angle QSR \cong \angle \underline{\hspace{1cm}}$



2. $\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$; $\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$

$\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$; $\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$

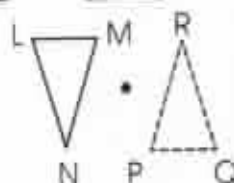
$\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$



Name the congruent angles of each rotation.

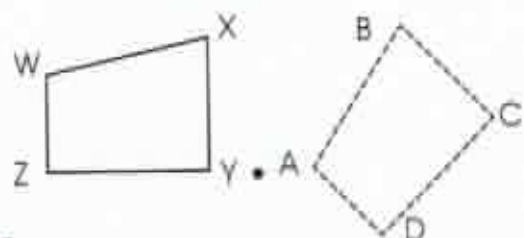
3. $\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$; $\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$

$\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$



4. $\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$; $\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$

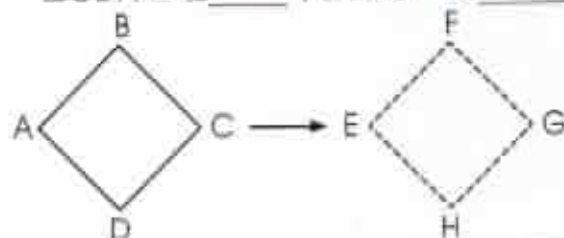
$\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$; $\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$



Name the congruent angles of each translation.

5. $\angle ABC \cong \angle \underline{\hspace{1cm}}$; $\angle BCD \cong \angle \underline{\hspace{1cm}}$

$\angle CDA \cong \angle \underline{\hspace{1cm}}$; $\angle DAB \cong \angle \underline{\hspace{1cm}}$



6. $\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$

$\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$

$\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$

$\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$

$\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$

